**Abstract**

Separator for an electrochemical cell comprising a flexible perforate carrier having a ceramic coating on and in the carrier, the ceramic coating comprising from 75 to 99 parts by mass of oxidic particles selected from particles of $ZrO_2$, $SiO_2$ and $Al_2O_3$ and comprising from 1 to 25 parts by mass of zeolite particles. These separators exhibit distinctly improved ion conductivity after filling with an electrolyte and are useful as separators in lithium ion batteries in particular.